

## Nuclear, Biological and Chemical Reconnaissance System (NBCRS)-Fox



## MISSION

Detect, identify, and mark areas of nuclear and chemical contamination; sample for nuclear, biological, and chemical (NBC) contamination; and report accurate information to supported commanders in real time.

## DESCRIPTION AND SPECIFICATIONS

The Nuclear, Biological and Chemical Reconnaissance System (NBCRS)-Fox Block I Modification (M93A1) contains an enhanced NBC sensor suite consisting of the M21 Remote Sensing Chemical Agent Alarm (RSCAAL), MM1 Mobile Mass Spectrometer, Chemical Agent Monitor/Improved Chemical Agent Monitor (CAM/ICAM), AN/VDR-2 Beta Radiac, and M22 Automatic Chemical Agent Detector/Alarm (ACADA). The NBC sensor suite has been digitally linked with the communications and navigation subsystems by a dual-purpose central processor system known as the Multipurpose Integrated Chemical Agent Detector (MICAD). The MICAD processor fully automates NBC warning and reporting functions and provides the crew commander with full situational awareness of the Fox's NBC sensors, navigation, and communications systems. The M93A1 Fox is also equipped with an advanced navigation system Global Positioning System (GPS) and Autonomous Navigation System (ANAV) that enables the system to accurately locate and report agent contamination. The mobility platform is a six-wheeled, all-wheel-drive armored vehicle capable of cross-country operation at speeds up to sixty-five mph.

The Fox System is fully amphibious with swimming speeds up to six mph. As a reconnaissance vehicle, it can locate, identify, and mark chemical/biological agents on the battlefield. The Fox usually accompanies the scouts or motorized reconnaissance forces when performing its NBC mission. It has an over-pressure filtration system that permits the crew to operate the system in a shirt-sleeve environment that is fully protected from the effects of NBC agents and contamination.

The M93A1 system is operated by a three-person crew (legacy systems require a four-person crew). The M93A1 will be one of the few systems fielded with a fully interactive class 4/5 electronic technical manual (IETM). The IETM is a single multimedia CD that contains the twelve-manual library and is structured to incorporate advanced diagnostics that support the system.

The Block II Modification to the M93A1 Fox NBCRS will incorporate enhanced technologies that will enable on-the-move standoff chemical agent detection. The sensor suite's Chemical Biological Mass Spectrometer (CBMS) will improve the detection and identification of liquid chemical agents while providing a first-time biological agent detection capability to the reconnaissance platform. An open architecture approach for sensor suite integration will enable expansion/upgrade of sensors and on-board computers at minimal cost as well as significant improvements in NBC reconnaissance reporting and situational awareness for commanders.

## FOREIGN COUNTERPART

China: NBC reconnaissance vehicle; Russia: BRDM-ZRKH, MTLB, RKHM, UAZ-469RKH; Germany: ABC Reconnaissance System.

## FOREIGN MILITARY SALES

None

## PROGRAM STATUS

Block I:

- 3QFY96 Awarded production contract for the Block I modification.
- 1QFY99 First unit equipped.
- 1QFY00 Fielding of 54 systems complete.

Block II: 2QFY00 System development and demonstration phase initiated.

## PROJECTED ACTIVITIES

Block I:

- FY96-02 Continue production of NBCRS Block 1 modification (M93A1); Approximately 87 legacy Fox systems planned in this conversion.
- 3QFY03 Complete fielding of the last Block I modification.

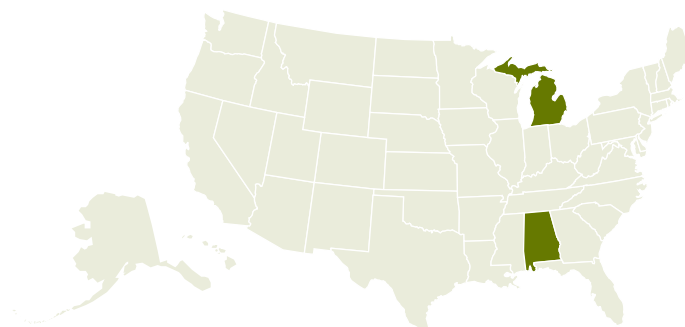
Block II:

- 3QFY01 Demonstration of the sensor suite.
- FY02 Engineering design test and limited user test.

## PRIME CONTRACTORS

Block I: General Dynamics (Detroit, MI; Anniston, AL); Henschel Wehrtechnik (Kassel, Germany)

Block II: To be determined



\* See appendix for list of subcontractors

